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<p>YIP HOCK SENG</p> <p>FACTORS AFFECTING DESIGN & BUILD CONSTRUCTION PROJECT SUCCESS IN MANILA, PHILIPPINES</p> <p>DBA 2019</p>	<p>FACTORS AFFECTING DESIGN & BUILD CONSTRUCTION PROJECT SUCCESS IN MANILA, PHILIPPINES</p> <p>YIP HOCK SENG</p> <p> UUM Universiti Utara Malaysia</p> <p>DOCTOR OF BUSINESS ADMINISTRATION UNIVERSITI UTARA MALAYSIA FEB 2019</p>
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**FACTORS AFFECTING DESIGN & BUILD CONSTRUCTION PROJECT
SUCCESS IN MANILA, PHILIPPINES**

By

YIP HOCK SENG



**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
in Partial Fulfillment of the Requirement for the Doctor of Business
Administration**



**OTHMAN YEOP ABDULLAH GRADUATE SCHOOL OF BUSINESS
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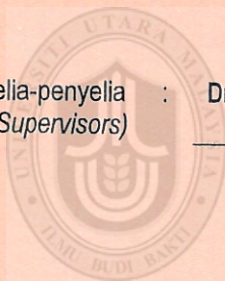
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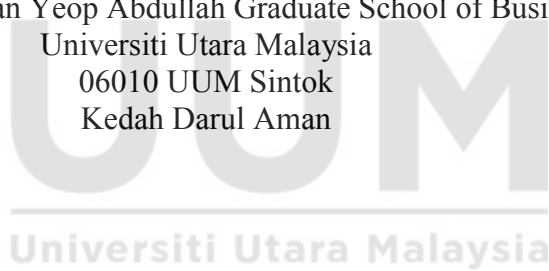

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ABSTRACT

The growth of the construction sector saw an equal increase in the number of construction firms and is being increasingly challenged to complete projects on time in Manila, the Philippines where the prominence of the Design and Build (D&B) method of construction approach has also gained importance. The rise of new innovative systems saw the emergence of new factors in the construction industry that will become future adopted in Manila, the Philippines. This study examined factors affecting the successful completion period of the construction industry whereby it is very crucial for the country's economic and market development. There are various factors such as client, contractor, consultant, internal/external techniques, which affect the construction project completion within the resources in Manila, the Philippines. The methodology employed was the quantitative approach. A total of 967 survey questionnaires were sent out and only 396 respondents fit to be analysed. Respondents involved were contractors, consultant, and developers. Factors under study include the management of the procurement system, currency costing, logistics delivery, and causes of delay to ensure the effective success completion time related to construction projects. It was found that organizational-related factors significantly impact the project performance of the overall construction industry. It was learned that critical success factors in project management playing significant roles in driving projects to examine the determinants of success completion time of Design & Build construction projects. Findings from this study shall be used by the authority in drafting a policy guideline for future construction development. Contribution from this study would be able to provide a better understanding of construction challenges for the future undertaking.

Keywords: Construction, design and build, manila, factors affecting, success completion period.

ABSTRAK

Pertumbuhan sektor pembinaan menyaksikan peningkatan yang sama dalam bilangan syarikat pembinaan dan cabaran untuk menyelesaikan projek tepat pada waktunya. Kaedah Reka dan Bina (D&B) dalam pendekatan pembinaan juga didapati semakin penting. Kebangkitan sistem inovasi baharu menyaksikan kemunculan faktor baharu dalam industri pembinaan yang bakal diterima pakai di Manila, Filipina. Kajian ini meneliti faktor yang mempengaruhi kejayaan tempoh penyelesaian projek industri pembinaan yang sangat penting kepada ekonomi negara dan pembangunan pasaran. Terdapat pelbagai faktor seperti pelanggan, kontraktor, perunding dan teknik dalaman/ luaran yang menjejaskan tempoh penyelesaian projek pembinaan dengan sumber yang ada di Manila, Filipina. Kajian ini menggunakan pendekatan kuantitatif. Sebanyak 967 borang soal selidik telah diedarkan tetapi hanya 396 borang yang boleh digunakan untuk dianalisis. Responden yang terlibat terdiri daripada kontraktor, perunding dan pemaju. Faktor yang dikaji termasuk sistem pengurusan perolehan, kos mata wang, penghantaran logistik, dan punca kelewatan dalam memastikan kejayaan tempoh penyelesaian berkaitan dengan projek pembinaan. Faktor berkaitan organisasi didapati memberi kesan yang signifikan terhadap prestasi keseluruhan industri pembinaan. Manakala faktor kejayaan yang kritikal dalam pengurusan projek didapati memainkan peranan yang signifikan dalam memacu projek bagi mengkaji penentu kejayaan tempoh penyelesaian projek pembinaan Reka & Bina. Hasil kajian ini boleh dimanfaatkan oleh pihak berkuasa dalam menyediakan garis panduan polisi untuk pembangunan pembinaan pada masa akan datang. Sumbangan kajian ini dapat memberikan pemahaman yang lebih mendalam mengenai cabaran pembinaan untuk usaha akan datang.

Kata kunci: Pembinaan, reka dan bina, manila, faktor yang mempengaruhi, kejayaan tempoh penyelesaian.

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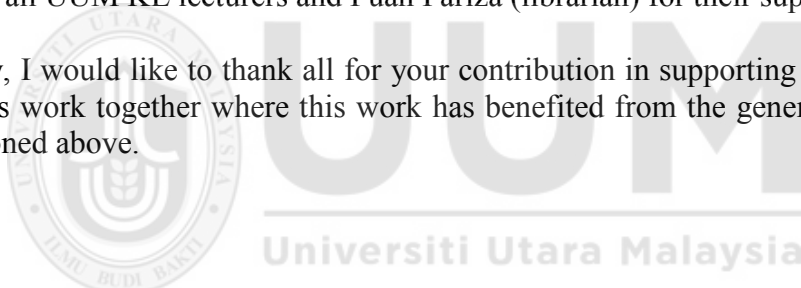


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LIST OF ABBREVIATIONS

AA	-	Grading from Philippines Construction Accreditation Board
AAA	-	Grading from Philippines Construction Accreditation Board
AAAA	-	Grading from Philippines Construction Accreditation Board
AACE	-	American Association of Cost Engineer
A&B	-	Grading from Philippines Construction Accreditation Board
BAA	-	British Airports Authority
C, D, E	-	Grading from Philippines Construction Accreditation Board
CFY	-	Current Fiscal Year
CICE	-	Construction Industry Cost Effectiveness
CIF	-	Cost, Insurance, Freight
CIOB	-	Chartered Institute of Buildings
CSF	-	Critical Success Factor
D&B	-	Design and Build
D-B-B	-	Design-Bid-Build
DV	-	Dependent Variable
E-Sourcing	-	Electronic Sourcing (Process using Web Technology)
FOB	-	Free on Board

H	-	Hypothesis
IMF	-	International Monetary Fund
IT	-	Information Technology
IV	-	Independent Variable
GDP	-	Gross Domestic Product
MLR	-	Multiple Linear Regression
OEM	-	Original Equipment Manufacturer
PCAB	-	Philippines Construction Accreditation Board
PMBOK	-	Project Management Body of Knowledge
PMI	-	Project Management Institute
PTT	-	Public Company Limited
RICS	-	Royal Institution of Chartered Surveyors
SPSS	-	Statistical Package for Social Science
UK	-	United Kingdom
UN	-	United Nation
USA	-	United States of America
USD	-	United State Dollar

Chapter 1

Introduction

1.1 Introduction

This chapter presents the introduction of the research. Section 1.2 presents the background of this study by reviewing the developments in the Philippines construction industry, in general, and in Manila specifically. Section 1.3 outlines the problem statement, which is then followed by the outline of the research questions and research objectives in Section 1.4 and Section 1.5 respectively. The research scope and limitation of the research are presented in Sections 1.6. Finally, Section 1.7 defines the definition of key terms and the operation thesis is shown in Section 1.8.

1.2 Background of the Study

The importance of the construction sector to a country's economic performance is phenomenal. The role of this sector to a country's growth is seen from the perspective of being the pillar of the built environment, generator of job opportunities and spillover effects (Wibowo, 2010; Young & Hall, 2015; and Ofori, 2016). The vitality of the construction sector is often depicted in industrial and economic reports.

The Global Construction Market 2012 – 2017 report (Figure 1.1) shows the increased growth rate of construction projects over the five years period across the world. The growth of this sector in the Asian region seems to be the most significant, plausibly

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Appendices

Appendix A	Summary of Literature Review World Growth Rate	38
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Appendix B



UNIVERSITI UTARA MALAYSIA

Dear Sir / Madam,

Re: Questionnaire Survey

I'm Yip Hock Seng, matric number 901164, a research student of the Doctor of Business Administration (DBA) program of Universiti Utara Malaysia (UUM) in Malaysia.

As part of the program, the study is required to conduct a survey regarding, **“Factors Affecting Design & Build Construction Project Success in Manila, Philippines”**. The objective of this study is to investigate the impact of the procurement strategy on construction project management success completion time.

Please be assured that all your responses will be kept strictly confidential and your identity will remain anonymous. All the data will be aggregated and will be strictly used for academic purpose only.

Looking forward to receiving your kind response in this regard and thank you in advance for your contributions. Should you have any queries related to this study, please feel free to contact through email at raykayip@hotmail.com or call at +6012 3903503.

Thank you.

Yip Hock Seng

Appendix B

To the respondents,

**Title: Factors Affecting Design & Build Construction
Project Success in Manila, Philippines.**

**Please take time to participate in this survey, even if only in part. EVERY response
will help the study to complete this research.
Your time and input are certainly appreciated.**

Section A: Your Profile

1 Please indicate your gender

Male

Female

2 Please indicate your gender

20 – 35 years old

36 – 50 years old

51 and above

- 3 Please indicate your nationality
Citizen of the Philippines
Expatriate

- 4 What is your highest level of education?
Certificate
Diploma
Bachelor's degree
Master's degree
Other qualifications _____ (*please describe*)

- 5 Please indicate the years your firm have been operating.
Less than 5 years
5 – 10 years
More than 10 years

- 6 Please select your role in the company
Senior managerial role
Managerial role
Executive
Non-executive

7 How long have you been working in this role?

Less than 1 year

1 – 3 years

More than 3 years

8 Please indicate the total fulltime equivalent employees working in your company

Less than 50 employees

51 – 100 employees

More than 100 employees

9 Please estimate your company's average gross revenue per year (*in million USD*)

Less than 5 million

5 – 8 million

8 – 11 million

More than 11 million

10 What type of projects does your company do under the Design & Build option?

Office building

Factories

Residential condominiums

Residential houses

Hotels

Others _____ (*please specify*)

SECTION B: PROCUREMENT STRATEGY OF DESIGN & BUILD TOWARDS SUCCESS COMPLETION TIME.

Thinking about the procurement methods that your company practice, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 1 We normally request quotation from the suppliers
- 2 We use tendering process in our company
- 3 We normally source from the same supplier
- 4 We often change suppliers for different projects

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the decisions taken on procurement confirmation, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 5 Procurement confirmation is normally done by the top management
- 6 Procurement confirmation is normally done by the accounts department
- 7 Procurement confirmation is normally done by the procurement department
- 8 Procurement confirmation is normally done by the project department

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the sourcing of materials for projects, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 9 We often source materials from local suppliers
- 10 We often source materials from foreign suppliers
- 11 We often source materials from both local and foreign suppliers

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the causes for procurement delays, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 12 Incomplete or wrong technical specifications causes delay in procurement
- 13 Poor overall planning causes delay in procurement
- 14 Inefficiency of the procurement team causes delay in procurement
- 15 Inefficient negotiation of contracts causes delay in procurement
- 16 Slow approval of the requests for procurement causes delay in procurement
- 17 Poor pricing and payment term setting causes delay in procurement

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the important criteria adopted for procurement process, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 18 Opening of the tendering bid is important criteria
- 19 Review of related documents is important criteria
- 20 Technical evaluation is important criteria
- 21 Financial assessment is important criteria
- 22 Identification of valuable offers is important criteria

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

SECTION C: CURRENCY COSTING OF DESIGN & BUILD TOWARDS SUCCESS COMPLETION TIME.

Thinking about the reasons that could cause a project to exceed the allocated budget, please circle the numbers that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 23 Design change can lead to over budget
- 24 Poor design development can lead to over budget
- 25 Insufficient information can lead to over budget
- 26 Poor project management can lead to over budget
- 27 Poor site conditions can lead to over budget
- 28 Time limits can lead to over budget
- 29 Occurrence of accidents at site can lead to over budget
- 30 Problems with equipment and machineries can lead to over budget

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the external issues that leads to over pricing of a project, please circle the numbers that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 31 Global financial crisis can lead to over pricing of a project
- 32 Price fluctuations can lead to over pricing of a project
- 33 Money exchange rate can lead to over pricing of a project
- 34 Government regulations can lead to over pricing of a project
- 35 Inefficient procurement team can lead to over pricing of a project
- 36 Logistics issues can lead to over pricing of a project

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the main determinants of a project’s costing, please circle numbers that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 37 Location influence the cost
- 38 Specifications influence the cost
- 39 Tax structure influence the cost
- 40 Timescale influence the cost
- 41 Procurement forms influence the cost
- 42 Requirements to build a new structure or simply refurbish influence the cost

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

SECTION D: LOGISTICS DELIVERY OF DESIGN & BUILD TOWARDS SUCCESS COMPLETION TIME.

Thinking about the characteristics that personnel in the logistic that best reflects your opinions on the following department must have, please circle the number following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 43 Having a sound experience in the field is an important characteristic
- 44 Having good communication skill is an important characteristic
- 45 Sound knowledge of the logistic system is an important characteristic
- 46 Ability to work as a team member is an important characteristic
- 47 Knowledge in documentations is an important characteristic
- 48 Having a diligent work attitude is an important characteristic

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the type of transportation used mostly for overseas procurement, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 49 Shipment is the most used transportation
- 50 Air freight is the most used transportation
- 51 Courier is the most used transportation

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the type of transportation used mostly for local procurement, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 52 Inland is the most used transportation
- 53 Air freight is the most used transportation
- 54 Courier is the most used transportation
- 55 Own collection is the most used transportation

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the on-time delivery of local procurement and overseas procurement, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 56 Inland transportation delivers on time
- 57 Air freight transportation delivers on time
- 58 Courier transportation delivers on time
- 59 Shipment transportation delivers on time

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the efficiency of local procurement and overseas procurement, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 60 Inland transportation is quite efficient
- 61 Air freight transportation is quite efficient
- 62 Courier transportation is quite efficient
- 63 Shipment transportation is quite efficient

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree



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SECTION E: PROJECT MANAGEMENT OF DESIGN & BUILD TOWARDS SUCCESS COMPLETION TIME.

Thinking about the important qualification of a project manager, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 64 A local candidate would be more qualified
- 65 A foreigner would be more qualified
- 66 Someone with a management degree
- 67 Someone with an engineering degree would be more qualified
- 68 Someone with a finance degree would be more qualified

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

Thinking about the criteria of a project manager, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 69 Effective planning is important criteria
- 70 Effective execution is important criteria
- 71 Effective initiative is important criteria

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

- 72 Effective implementation is important criteria
 73 Effective management is important criteria
 74 Effective decision making is important criteria
 75 Effective cost control is important criteria
 76 Good experience is important criteria
 77 Taking responsibility is important criteria
 78 High level of confidence is important criteria
 79 Good communication skill is important criteria
 80 Good negotiation skill is important criteria
 81 Effective risk handling is important criteria

Thinking about the management methodology required for a project manager, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 82 Engagement of the right team is an important management method
 83 Doing proper documentation is an important management method
 84 Creating a realistic schedule is an important management method
 85 Providing regular updates is an important management method
 86 Ability to solve problems is an important management method
 87 Doing brainstorming is an important management method

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

SECTION F: CAUSES OF DELAY OF DESIGN & BUILD TOWARDS SUCCESS COMPLETION TIME.

Thinking about the causes of the delay in completion of projects, please circle the number that best reflects your opinions on the following.

(Please note: 1 is “strongly disagree” through to 5, which is “strongly agree”)

- 88 Confusions are the cause of delay in completing projects
- 89 Improper feasibility is the cause of delay in completing projects
- 90 Improper bidding is the cause of delay in completing projects
- 91 Delay in payments are the cause of delay in completing projects
- 92 Client’s financial issue is the cause of delay in completing projects
- 93 Slow response from clients are the cause of delay in completing projects
- 94 Incapable staffs are the cause of delay in completing projects
- 95 Poor leadership is the cause of delay in completing projects
- 96 Lack of timely decision is the cause of delay in completing projects
- 97 Large number of participants are the cause of delay in completing projects
- 98 Poor project planning is the cause of delay in completing projects
- 99 Poor supervisions are the cause of delay in completing projects
- 100 Bad risk allocation is the cause of delay in completing projects

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

***** THANK YOU *****